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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BERNS, DANIEL J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/554,223	Applicant(s) MCVEY ET AL.	
	Examiner DANIEL BERNS	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54-104 is/are pending in the application.
- 4a) Of the above claim(s) 81-90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54-80, 91-96 and 98-104 is/are rejected.
- 7) ☒ Claim(s) 94-95, 97 and 104 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10-20-05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10-20-05; 3-21-07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 54-80) in the reply filed on 10/20/08 is acknowledged. The traversal is on the ground(s) that Groups I, II, and IV contain similar limitations and requirements and are thus non-independent and/or indistinct. This is found persuasive vis-à-vis Groups I, III (rejoined *sua sponte* by Examiner), V (same) and IV, for which the restriction requirement has been withdrawn - said groups shall be examined together as a result - but unpersuasive vis-à-vis Group II. An undue search burden would exist were Group II ("A") to be examined alongside Groups I, III, IV and V(collectively "B"), as A and B are within different classes and multiple searches would be required were A and B to be examined together. Applicant's assertion of a unique nexus between the apparatus of Group II and the method of Group I is noted but disagreed with by Examiner- said apparatus may indeed be employed to perform other methods than Group I's, such as treating raw materials (i.e.: wood, etc.) prior to specialized processing. Stated another way, apparatuses are not generic to process claims because the apparatus may be used to perform other processes than those claimed. In summary, Groups I, III, IV and V shall be examined together, and the restriction requirement separating Group II therefrom is still deemed proper and is therefore made FINAL.
2. Claims 81-90 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group, there being no allowable generic or linking claim. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any

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amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification and Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not properly include the following reference sign(s) mentioned in the description: **46**.

Component **46** appears within the specification's discussion of Fig. 1, from which said component is absent. *See* applicant's Pre-grant Publication No. US 2006/0205991 (published 9/14/06) at par. 0046. Likewise, applicant's discussion of Fig. 3, in which component **46** appears, does not mention this component. *See id.* at par. 0049. Appropriate corrections are required. If Fig. 1 should indeed contain component **46**, said drawing is objected to, and corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings, if applicable, will not be held in abeyance.

4. The specification is objected to for the following informalities: component **34** is listed in the specification as a "control or regulator valve" (*see id.* at par. 0041 and 0043) and "a source... of an active nitrogen containing compound[.]" *See id.* at par. 0048. The same component cannot be described in multiple ways. Component **34** appears in Fig. 1 as a valve-type assembly;

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component **32** therein is an ammonia tank. Appropriate correction (i.e.: changing par. 0048's "source..." reference number to **32** from **34**) is required.

Claim Objections

5. Claim 104 is objected to because of the following informalities: the term "is" therein should read "are[.]" Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 54-80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 54, it is unclear as to whether the peroxide and nitrogen-containing compound are to be applied to the agent simultaneously as a mixture or in a sequential fashion. The former interpretation has been applied for examination purposes. Should a different interpretation thereof be desired, applicant must explicitly so state in replying to this Office Action. Applicant is hereby advised that, since independent claim 54 is being rejected for deficiencies under 35 U.S.C. 112, 2nd paragraph, all claims depending therefrom also inherently contain such deficiencies - cure thereof is required for any and all such claims affected even if any such claim were found to be otherwise allowable.

8. Claims 92-95 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 92, the term "sufficient time" is variable and capable of multiple, differing interpretations, especially when read in concert with the also-indefinite term

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“deactivate[.]” It is unclear what level of neutralization/destruction of the chemical agent is required to satisfy the “deactivate” term - as such, the "sufficient time" term may vary independently of or in association with the "deactivate" term, as different levels of deactivation would presumably take different amounts of time. As above, applicant is advised that, since independent claim 92 is being rejected for deficiencies under 35 U.S.C. 112, 2nd paragraph, all claims depending therefrom also inherently contain such deficiencies - cure thereof is required for any and all such claims affected even if any such claim were found to be otherwise allowable.

9. Claim 104 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 104 depends from claim 50, a cancelled claim. Of all the independent claims examined, claim 104 finds proper antecedent support only from claim 91, and has been interpreted to depend therefrom for examination purposes. Should a different interpretation be desired, applicant must explicitly so state in replying to this Office Action.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 91-93, 96, and 98-103 rejected under 35 U.S.C. 103(a) as being unpatentable over Grebinski, Pat. No. 4,867,799 (1989) (appears in Applicant's Information Disclosure Statement – "IDS"). Regarding claims 91-92, 96 and 102-103, Grebinski discloses a method of treating an object by enclosing the object within a sealed treatment chamber and contacting the object with a stream comprising H_2O_2 and NH_3 , both in the vapor phase. *See id.* at col. 2, ln. 45-55; clm. 1. The vapors may be premixed and sprayed through a single nozzle or be mixed upon the object, sprayed through multiple nozzles. *See id.* at Figs. 1-2; col. 3, ln. 13-28. A regulator for varying the flow amount of H_2O_2 is included therein, implicitly disclosing an ability to adjust the relative amounts of H_2O_2 and NH_3 . *See id.* at col. 4, ln. 44-50. Although use of the above procedure with pathogenic (instant claim 92), biologically active (instant claim 96) chemical agents, prions and/or biotoxins (instant claim 102) such as GD (instant claim 91) and/or other G-type nerve agents (instant claim 103) (collectively "the toxics") to destroy or otherwise neutralize the same is not disclosed by Grebinski, the fact that the above process contains all the claimed process steps for defeating the toxics while not mentioning the same nevertheless renders the above claims *prima facie* obvious, as Grebinski's disclosure is suitable for the claims' intended purpose in general: breaking down various organic molecules. *See, e.g., Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945); MPEP 2144.07.

Regarding claims 93, 98, and 100-101, Grebinski discloses the use of H_2O_2 and NH_3 , both in gaseous form. *See id.* at col. 2, ln. 45-55; clm. 1.

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Regarding claim 99, since H_2O_2 boils at about 152 deg. C given a 1 atm (760mm Hg) pressure (i.e.: has a vapor pressure of 1 atm at 152 deg. C), and Grebinski's H_2O_2 supply is heated to 100-110 deg. C to create gaseous H_2O_2 , Grebinski at least partially vaporizes a liquid peroxide to form a peroxide vapor. *See id.* at col. 3, ln. 65 to col. 4, ln. 4, and col. 4, ln. 25-29.

It should be noted that the recitations "for decontamination of an item contaminated with GD" within instant claim 91, "of deactivating a pathogenic chemical agent" within instant claim 92, and "of deactivating a biologically active substance" within instant claim 96 have not been given patentable weight because the recitations occur in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. *See In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976); *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). This explanation provides further support for the applicability of Grebinski's procedure upon the claimed toxics, for as the preamble 'intended use' statements directing the claimed methods toward specific substances (i.e.: the toxics above) are not accorded patentable weight, Grebinski's applicability to such procedures in general should translate well against the claimed toxics in specific.

Allowable Subject Matter

13. Claims 54-80 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The following is a statement of reasons for the indication of allowable subject matter: Grebinski, discussed above, discloses the use of H_2O_2 and NH_3 (both gaseous) to treat various objects. However, as Grebinski's H_2O_2 :

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NH₃ ratio is 1:5, it is clear that Grebinski's main ingredient is NH₃, and that H₂O₂ is but an additive in the prior art process. The H₂O₂ : NH₃ ratio in claim 54 clearly indicates that H₂O₂ is the main ingredient in the claimed process, and that NH₃ is but an additive therein. This disparity indicates that claim 54 and Grebinski manifest differing inventive concepts- as such, claim 54 (and all claims depending therefrom) would be allowable when and if re-written to overcome the above rejection(s) under 35 U.S.C. 112, 2nd paragraph.

14. Claims 94-95 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claims 94-95 are additionally objected to as being dependent upon base claims rejected over prior art. The reasons for the indication of allowable subject matter are as follows: regarding claim 94, Grebinski does not disclose or suggest reagent concentrations at or near the claimed ranges; regarding claim 95, Grebinski's operating temperature ranges from about 65-185 deg. C (*see id.* at col. 3, ln. 60-64 and col. 4, ln. 50-52).

15. Claim 97 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons for the indication of allowable subject matter are as follows: Grebinski's use of ammonia, which is a gas at room temperature, does not require atomization of a liquid alkaline compound.

16. Claim 104 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claim 104 is additionally objected to as being

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dependent upon a base claim (claim 91, as interpreted above) rejected over prior art. The reasons for the indication of allowable subject matter are the same as those for claims 54-80, above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL BERNIS whose telephone number is (571)270-5839.

The examiner can normally be reached on Monday thru Thursday, 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached at (571)272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DB/ November 25, 2008

/Stuart Hendrickson/
Primary Examiner, Art Unit 1793